

ABSTRACT

[0073] Embodiments of the present invention provide pixel cells with increased storage capacity, which are capable of anti-blooming operations. In an exemplary embodiment a pixel cell has an electronic shutter that transfers charge generated by a photo-conversion device to a storage node before further transferring the charge to the pixel cell's floating diffusion node. Each pixel cell also includes an anti-blooming transistor for directing excess charge out of each respective pixel cell, thus preventing blooming. Additionally, two or more pixel cells of an array may share a floating diffusion node and reset and readout circuitry.